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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Michael J. Porsch

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EXAMINER

SERGEANT, RABON A

ART UNIT

PAPER NUMBER

1796

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/808,084	<b>Applicant(s)</b> PORSCH ET AL.	
	<b>Examiner</b> Rabon Sergeant	<b>Art Unit</b> 1796	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-82 is/are pending in the application.
- 4a) Of the above claim(s) 3-5, 14, 15, 32-34, 43, 44, 69, 77 and 78 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6-13, 16-31, 35-42, 45-66, 68, 70-76 and 79-82 is/are rejected.
- 7) ☒ Claim(s) 67 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

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1. Claims 2, 6-13, 16-31, 35-42, 45-61, 66, 70-76, 79, and 80 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Throughout the claims, the language, "low molecular weight silane adduct", renders the claims indefinite, because "low molecular weight" is a subjective term. It cannot be quantitatively determined exactly what values are encompassed by the language. Applicants' response has been considered as well as the description of the adduct at pages 12-14 of the specification; however, it remains unclear exactly what range of molecular weights is encompassed by the terminology. Since it cannot be determined how high the molecular weight may be and still satisfy the "low molecular weight" requirement, it cannot be determined exactly what compounds or adducts satisfy the claim limitations.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Schmalstieg et al. ('751).

Patentees disclose curable compositions containing terminal alkoxysilane groups wherein secondary amine alkoxy silanes are reacted with polyisocyanates. See abstract and columns 3 and 4. Patentees further disclose at column 7, lines 40-44 that suitable polyisocyanates include NCO semi-prepolymers. Since the disclosed semi-prepolymers contain both prepolymeric polyisocyanates and monomeric starting polyisocyanates, the position is taken that the reaction of the semi-prepolymer with the aminosilane yields a composition containing both a silane-terminated polyurethane prepolymer component and a silane-terminated monomeric diisocyanate component.

4. Applicants' response has been considered; however, it is insufficient to overcome the prior art rejection. Applicants have argued that the alkoxysilane of the reference is not reacted with a silane terminated polyurethane prepolymer component in combination with a silane terminated monomeric diisocyanate to form the reaction product as presently claimed. In response, the examiner has set forth his rationale explaining how each of applicants' components (a) and (b) are disclosed, and it is noted that the reference clearly discloses that the composition is useful in coatings, sealants, and adhesives, which denotes reaction of the composition. Accordingly, the examiner has set forth how each of the claim limitations is met, and it is not

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seen that applicants' response refutes this position. Furthermore, applicants' argument that the disclosed compound has no well defined silane terminus is without merit. To the extent claimed, "silane-terminated" merely requires that the chain terminates with a silane group or function. Clearly, given the disclosed reactants and disclosed structures, such termination is disclosed by the reference.

5. Claims 1, 2, 6-9, 12, 13, 16, 18-31, 35-38, 41, 42, 45, 47-66, 68, 70-72, 75, 76, 79, 81, and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnston et al. ('170) in view of Fenn et al. ('246).

Johnston et al. disclose compositions suitable for sealing and coating substrates comprising silane terminated polyurethane prepolymers and adhesion promoters, wherein the silane terminated polyurethane prepolymers are produced by reacting a secondary aminosilane, that corresponds to applicants' aminosilane, with an isocyanate terminated prepolymer, wherein the prepolymers are produced from polyols that correspond to those instantly claimed. Patentees further disclose that the compositions may contain catalysts as well as conventional additives, such as fillers, plasticizers, thixotropes, antioxidants, and UV stabilizers. See abstract and columns 2 and 4-7. Though patentees fail to disclose all of the applicants' claimed additives, the examiner takes official notice under MPEP 2144.03 that the claimed additives were well-known and conventional within the art at the time of invention. Accordingly, it would have been obvious to incorporate these components within the formulation for their art recognized purposes.

6. Johnston et al. are silent regarding applicants' claimed silane terminated monomeric diisocyanate component; however, the incorporation of silane functional oligomers, derived from

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the reaction of monomeric diisocyanates with secondary aminosilanes, within silane functional polymer coating compositions was known at the time of invention. Fenn et al. disclose that the use of such oligomers within silane functional polymer coating compositions improves such properties as water resistance, clarity, and hardness. See columns 2-4. Accordingly, the position is taken that it would have been obvious to incorporate such a component into the silane terminated polymer coating composition of the primary reference, so as to obtain a coating composition having the aforementioned improved properties.

7. Claims 1, 2, 6-9, 12, 13, 16-31, 35-38, 41, 42, 45-66, 68, 70-72, 75, 76, and 79-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roesler et al. (US 2006/0173140) in view of Fenn et al. ('246).

Roesler et al. disclose compositions suitable for coating substrates comprising silane terminated polyurethane prepolymers, wherein the silane terminated polyurethane prepolymers are produced by reacting a secondary aminosilane, that corresponds to applicants' aminosilane, with an isocyanate terminated prepolymer, wherein the prepolymers are produced from polyether polyols having a degree of unsaturation that meets that claimed by applicants. Roesler et al. further disclose that the compositions may contain catalysts and solvents as well as conventional additives, such as leveling agents, wetting agents, flow control agents, antiskinning agents, antifoaming agents, fillers, viscosity regulators, plasticizers, pigments, dyes, UV absorbers and stabilizers against thermal and oxidative degradation. See abstract and paragraphs [0022] through [0031], [0036], [0037], [0041], [0042], and [0075] through [0078]. Though Roesler et al. fail to disclose all of the applicants' claimed additives, the examiner takes official notice under MPEP 2144.03 that the claimed additives were well-known and conventional within the

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art at the time of invention. Accordingly, it would have been obvious to incorporate these components within the formulation for their art recognized purposes.

8. Roesler et al. are silent regarding applicants' claimed silane terminated monomeric diisocyanate component; however, the incorporation of silane functional oligomers, derived from the reaction of monomeric diisocyanates with secondary aminosilanes, within silane functional polymer coating compositions was known at the time of invention. Fenn et al. disclose that the use of such oligomers within silane functional polymer coating compositions improves such properties as water resistance, clarity, and hardness. See columns 2-4. Accordingly, the position is taken that it would have been obvious to incorporate such a component into the silane terminated polymer coating composition of the primary reference, so as to obtain a coating composition having the aforementioned improved properties.

9. Applicants' response to the obviousness rejections has been considered; however, the responses are insufficient to overcome the prior art rejections. Since applicants' arguments in response to each rejection are concerned with Fenn et al. and are essentially the same, the examiner responds to the arguments for each rejection as follows. Firstly, applicants' have argued that the oligomers of Fenn et al. are not silane terminated monomeric diisocyanates. In response, the examiner finds no distinction between the respective compounds. The compounds of Fenn et al. and the instant compounds are produced from the same starting components, specifically, a monofunctional amine silane coupling agent and a polyisocyanate, such as a diisocyanate. See column 3, lines 5-15. Applicants have argued that the silane functional polymers disclosed do not include polyurethane polymers. In response, though polyurethanes are not specifically disclosed, they are encompassed by the broad disclosure of silane terminated

polymers. Furthermore, the disclosed polyesters and polyurethanes are chemically similar. Accordingly, one would have reasonably expected that the oligomer would be operative with virtually any silane terminated polymer, including polyurethanes. Applicants have presented arguments that the oligomer disclosed as being operative is not silane terminated. In response, it is initially noted that a reference is good for all that it teaches; therefore, relevant teachings are not limited to the examples. Furthermore, the examiner does not understand these arguments, since all of the exemplified compounds are silane terminated. Accordingly, it is not seen how arguments pertaining to a non-silane, non-isocyanate component are particularly relevant to the issues at hand. In summation, despite applicants' arguments, the position is maintained that the examiner has set forth the requisite motivation to combine the teachings of the references, so as to render the instant claims *prima facie* obvious, and it not seen that applicants' have rebutted this position by adequate rationale or by other means, such as a showing of unexpected results.

10. Claim 67 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.



**RABON SERGENT  
PRIMARY EXAMINER**

R. Sergent  
October 14, 2007